Amendments to the Claims

Listing of Claims

This listing of claims will replace all prior versions and listings of claims in the application.

1-9   (cancelled)

10.   (previously presented) A method for determining the differences between the molecular interactions of two different mixtures of molecules, comprising:

labeling a first mixture of molecules and a target mixture of molecules;

introducing said first mixture of molecules to a combinatorial library of solid phase supports;

incubating said combinatorial library with said first mixture of molecules;

performing a first marking step to mark those of said solid phase supports that have a molecule of said first mixture bound to them;

introducing said target mixture of molecules to said combinatorial library;

incubating said combinatorial library with said target mixture of molecules;

obtaining a first image showing as marked those of said solid phase supports that have a molecule of said first mixture bound to them;

performing a second marking step to mark those of said solid phase supports that have a molecule of said target mixture bound to them;

obtaining a second image showing as marked those of said solid phase supports that have a molecule of said target mixture bound to them; and

(8141/9886/AAM/949524.DOC;)   2   Attorney Docket 8141/9886

PAGE 5/8 * RCVD AT 4/24/2007 4:35:54 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-3/21 * DNIS:2738300 * CSID:19164461611 * DURATION (mm-ss):02-20

creating a third image identifying those of said solid phase supports that have a molecule of said target mixture bound to them, wherein said third image is created by comparing said first image and said second image;

wherein said first and said second images are graphical images, and said third image is created by comparing said first and said second images on a pixel-by-pixel basis; and, further, wherein said first image is image "A," said second image is image "B," and said third image is created by applying a formula $(B-A)/A$ on a pixel-by-pixel basis.

11. (cancelled)

12. (cancelled)

13. (previously presented) A method for determining the differences between the molecular interactions of two different mixtures of molecules and identifying a ligand specific for a molecule in one of the mixtures, comprising:

labeling a first mixture of molecules and a target mixture of molecules;

introducing said first mixture of molecules to a combinatorial library of solid phase supports;

incubating said combinatorial library with said first mixture of molecules;

performing a first marking step to mark those of said solid phase supports that have a molecule of said first mixture bound to them;

introducing said target mixture of molecules to said combinatorial library;

incubating said combinatorial library with said target mixture of molecules;

obtaining a first image showing as marked those of said solid phase supports that have a molecule of said first mixture bound to them;

performing a second marking step to mark those of said solid phase supports that have a molecule of said target mixture bound to them;

obtaining a second image showing as marked those of said solid phase supports that have a molecule of said target mixture bound to them;

creating a third image identifying those of said solid phase supports that have a molecule of said target mixture bound to them, wherein said third image is created by comparing said first image and said second image;

isolating one of said solid phase supports identified in said third image; and

determining the chemical structure of a ligand on one of said isolated solid phase supports;

wherein said first and said second images are graphical images, and said third image is created by comparing said first and said second images on a pixel-by-pixel basis; and, further, wherein said first image is image "A," said second image is image "B," and said third image is created by applying a formula $(B-A)/A$ on a pixel-by-pixel basis.

14-20 (cancelled)